Solar-Terrestrial Research in the Space Station Era

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Because of the immense size of the solar-terrestrial system and its tightly-coupled physical nature, its study requires a carefully planned and coordinated approach using a variety of observational techniques. Of fundamental importance is the simultaneous measurement of the varying sun, the solar wind, and the Earth's magnetosphere and atmosphere. These multiple measurements require a multi-spacecraft approach with both remote sensing of the sun and atmosphere and in situ measurement of the solar wind and magnetosphere. The decade of the 1990's will bring an opportunity to carry out the simultaneous set of measurements using a combination of instruments on missions such as the International Solar Terrestrial Physics Program, the GOES satellites, and the space station. For the first time it will be possible to determine solar variability and to sample the response of the solar wind and geospace portion of the environment in a thorough way. This talk will identify the potential opportunities for solar-terrestrial studies during the coming era of the space station.